

STATE OF NORTH CAROLINA

Approved Classification: _____

OFFICE OF STATE PERSONNEL

Effective Date: _____

Analyst: _____

POSITION DESCRIPTION FORM (PD-102R-92)

(This Space for Personnel Dept. Use Only)

1. Present Classification Title of Position Transportation Technician III	7. Pres. 15 Digit Position No.	Prop. 15 Digit Pos. No.
2. Usual Working Title of Position Transportation Technician III - Property Surveys	8. Department, University, Commission, or Agency Transportation	
3. Requested Classification of Position Transportation Technician III	9. Institution & Division Highways	
4. Name of Immediate Supervisor	10. Section and Unit Highway Design \ Location & Surveys	
5. Supervisor's Position Title & Position Number TE II - Property Surveys	11. Street Address, City and County	
6. Name of Employee	12. Location of Workplace, Bldg. And Room No.	

I. A. Primary Purpose of Organizational Unit:

The primary purpose of Location & Surveys is to serve as support services in providing engineering analysis, mapping, and engineering data for the design of transportation facilities and the acquisition of property for the construction of transportation facilities.

B. Primary Purpose of Position:

This is very advanced level technical work in planning, directing and coordinating a squad of technicians performing moderately complex technical calculations supporting design engineers, surveyors, and attorneys in a functional area such as preparation of CADD drawings and other special court exhibits for condemnation surveys. The primary purpose of this class is to supervise, schedule, prioritize and evaluate the work of subordinates; provide on-the-job training; performing advanced manual or electronic design drafting; and preparing preliminary design for special projects. Employee normally spend some portion of their time performing and checking the more complex or advanced work of their section. Employees may draft extremely detailed plans such as color enhanced mapping; check drawings and calculations completed by other technicians or engineers; and perform a variety of complex calculations. Employees may also compile and analyze data and prepare written or oral report as requested by engineers or attorneys. These duties require a thorough knowledge of mapping practices and standards as set forth in the General Statutes of North Carolina and the Board of Registration for Engineers and Land Surveyors. A thorough knowledge of surveying practices, engineering computations and drafting are also needed.

C. Work Schedule:

Normal work hours are 7:30 AM to 4:30 PM, Monday through Friday, with 1 hour for lunch. Flex time or seasonably variable work hours may be used in individual offices based upon needs and circumstances.

D. Change in Responsibilities or Organizational Relationship:

This is a change in duties of an existing position. As technology and procedures have changed, the need has increased for a more technical position to provide CADD support to the field of mapping and preparation of court exhibits for condemnations. Reorganization of the Unit has created need for a higher level technician to provide support for field offices in engineering computations.

- II. A. DESCRIPTION OF RESPONSIBILITIES AND DUTIES: Method Used (Check One) Order of importance X__
Sequential order _____

Place an asterisk (*) next to each essential function. (See instructions for complete explanation.) Please note percentage of time for each function.

No. %

- 1 45 **Supervision** - Supervises others in CADD activities, assisting lower level technicians in preparation of final condemnation maps and other exhibits, such as color enhancements of court maps; digitizing aerial photographs for additional topographic features; overlays for photographs; charts depicting appraised values of land and improvements; and other exhibits as requested by attorneys and other engineers and expert witnesses, for use in condemnation cases. Supervises others in engineering computations (such as property ties) in later stages of plan sheet development.
- 2 25 **Exhibit Preparation/Review** - Accurately reads, comprehends and interprets data on CADD files, plan sheets, deeds, and property survey legal files in preparing final property survey maps as court exhibits. Utilizes CADD and other computer hardware/software in preparation of more complex or critical property maps, exhibits, etc., providing additional input to attorneys on exhibit appearance. Checks and reviews preliminary and final condemnation maps, checking for accuracy, completeness, and conformity to unit and NCDOT guidelines.
- 3 20 **Computations** - Performs a wide variety of complex engineering computations necessary for making property ties for project plans, as well as other engineering computations for TIP projects as needed.
- 4 5 **Database Maintenance** - Maintains GIS database of condemnation maps prepared by or for L&S Unit.
- 5 5 **Other** - Performs other duties as required by supervisor.

II. B. OTHER POSITION CHARACTERISTICS: (cont.)

1. Accuracy Required in Work:

Engineering measurements and calculations necessary to millimeter reporting is required. A thorough knowledge of necessary data and proper format is needed.

2. Consequence of Error:

Errors cause delays in the completion of plans, erroneous design, and costly revisions. Errors in mapping and exhibits could cause erroneous right of way agreements and settlements, postponements of court cases and monies paid for incorrect right of way. This can cause problems not only for the project which work is being performed, but also when legal documents are drawn from plans and maps which contain errors it will effect property surveys of and around subject property for many years to come.

3. Instructions Provided to Employee:

Position requirements include sufficient experience and knowledge to enable the employee to perform the duties of this position. Goals are defined and procedural guidelines are established. Deadlines are established when applicable. It is usually up to the employee to ensure completion of tasks in a timely and accurate manner, and to determine the best method to resolve issues, provide and present data, or prepare for the assigned task. Instructions may be either oral or written and may be general or specific in nature, according to the scope of the work.

4. Guides, Regulations, Policies and References Used by Employee:

NCDOT Highway Design Manual; AASHTO Geometric Design Policy; CADD and other computer references and manuals; General Statutes of North Carolina as related to Highways; NCDOT Personnel Manual; NCDOT Field Fiscal Procedural Manual; NCDOT Workplace Safety Manual; NCDOT and FHWA Manuals on Uniform Traffic Control Devices (MUTCD); Legal Principles of Boundary Surveying and other legal texts on surveying; various engineering and surveying texts including cadastral, geodesy, and route location; general practices, procedures, and ethics of professional engineering and surveying as described by the NC State Board of Registration for Professional Engineers and Registered Land Surveyors; dictionary.

5. Supervision Received by Employee:

This employee is under the supervision of the Property Survey Engineer. Technical problem areas are either resolved at this level or passed up to higher level technicians or engineers for involvement or resolution. Tasks and duties may be reviewed during and after completion. Personnel matters are reviewed with immediate supervisor as needed. Personnel problems are referred to supervisor for resolution.

6. Variety and Purpose of Personal Contacts:

Employee must be able to communicate effectively with fellow employees and other units including other technicians, engineers, and attorneys in gathering and presenting data necessary for condemnation mapping; and in the computations of property ties to design alignments.

7. Physical Effort:

Strenuous physical effort is not usually required however, stress management is a major concern. Duties require long periods of work at CADD workstations which involves intense concentration. Some physical labor such as traversing rough terrain, chopping brush, or carrying heavy or cumbersome equipment may be requested at times. Travel to different areas of the state may be required for some tasks.

8. Work Environment and Conditions:

Work is primarily limited to office duties located in the central office of the Location and Surveys Unit, with some exposure to hazardous chemical spray in exhibit preparation. Employee may be requested to work with a field survey crew on special projects. Outside work may occur in any type of geographic conditions, at any time of day.

9. Machines, Tools, Instruments, Equipment and Materials Used:

A general knowledge of all field engineering surveying instruments such as theodolites, electronic distance measuring devices, and office machinery including calculator, computers, and CADD workstations. Mainframe terminal, PC computers, calculators and CADD workstations are used on a daily basis.

10. Visual Attention, Mental Concentration and Manipulative Skills:

Close visual attention is required during computations, CADD operations, review and checking of maps and legal documents contained in the legal file. Employee must be prepared to make sound decisions on short notice. Mental alertness is vital while making decisions involving engineering principles and applications.

11. Safety for Others:

Most of the work performed by the employee is independent of other employees. However, practical application of work duties and an overall concern for fellow employees must be executed and ever present in the mind of all employees.

12. Dynamics of Work:

Court exhibits may go through several revisions based upon the needs of attorneys and the direction of court cases, often with very short notice. Software for electronic instrumentation and CADD use by Location and Surveys is updated continuously. Property survey condemnations are increasing each year. Personnel and scheduling changes must be made to assure that due dates are met.

III. KNOWLEDGE, SKILLS & ABILITIES AND TRAINING & EXPERIENCE REQUIREMENTS:

A. Knowledges, Skills and Abilities:

A thorough knowledge of the principles and practices of professional civil engineering as it relates to the location and design of highways with a particular emphasis on route, geodetic, and cadastral surveying and mapping principles. A working knowledge of electronic surveying instruments and the MicroStation CADD system and GeoPak software. A knowledge of legal aspects of land surveying as it relates to right of way condemnation procedures. An understanding of the organization and operation of the North Carolina Department of Transportation. Skills in written and oral communication. An ability to interpret plans, policies and specifications.

B. 1. Required Minimum Training:

Graduation from a two year technical college with a degree in Civil Engineering or Survey Technology and three years of progressive transportation experience.

2. Additional Training/Experience:

Additional training as needed will be supplied by supervisor and Location & Surveys Unit or NCDOT Training Personnel.

3. Equivalent Training and Experience:

Graduation from high school and seven years of progressive transportation technician experience; or an equivalent combination of training and related experience.

C. License or Certification Required by Statute or Regulation:

NC Driver's License is required.

IV. CERTIFICATION: Signatures indicate agreement with all information provided, including designation of essential functions.

Supervisor's Certification: I certify that (a) I am the Immediate Supervisor of this position, that (b) I have provided a complete and accurate description of responsibilities and duties and (c) I have verified (and reconciled as needed) its accuracy and completeness with the employee.

Signature _____ Title: _____ Date: _____

Employee's Certification: I certify that I have reviewed this position description and that it is a complete and accurate description of my responsibilities and duties.

Signature _____ Title: _____ Date: _____

Section or Division Manager's Certification: I certify that this position description, completed by the above named immediate supervisor, is complete and accurate.

Signature _____ Title: _____ Date: _____

Department Head or Authorized Representative's Certification: I certify that this is an authorized, official position description of the subject position.

Signature _____ Title: _____ Date: _____